



Indian Institute of Information Technology, Sri City Chittoor
(An Institute of National Importance under an Act of Parliament)

520190010007
Anirudh Jakhar

Multimedia Systems
Mid-Sem Exam - UG3

Date: 21/03/2022
Duration: 90min.

Total: 30 Marks

Answer all questions.

1. (a) Differentiate between hypertext and hypermedia. Briefly discuss the components of a multimedia system. [5+2+3]
(b) Define the following terminologies associated with text multimedia data
i. Leading =
ii. Kerning between ch.
iii. Typeface
iv. Font
(c) How the Devanagari character क, with code point 2325 can be represented in UTF-8, UTF-16 and UTF-32.
2. (a) What is a color look-up table and how is it used to represent color? Give an advantage and a disadvantage of this representation with respect to true color (24-bit) representation. [5+3+2]
(b) What is CMYK color model and where it is mostly used. Given a color represented in RGB color space as $R=0.2$, $G=0.6$ and $B=0.3$, what is its representation in CMYK.
(c) An image of size (640×480) pixels, how many KB are required to store this image in two cases:
i. Binary
ii. Gray scale
3. (a) Explain different types of video signal. (Composite, S., comp.) [3+4+3]
(b) What is YUV sub-sampling? Discuss the different YUV-subsampling schemes used in digital video.
(c) Differentiate between uniform and non-uniform quantization.